ENCLOSURE

SUMMARY HIGHLIGHTS OF THE MARCH 5-6, 2003, U.S. DEPARTMENT OF ENERGY/U.S. NUCLEAR REGULATORY COMMISSION TECHNICAL EXCHANGE ON DOE OWNED SPENT NUCLEAR FUEL

On Wednesday and Thursday, March 5 and 6, 2003, the U.S. Department of Energy (DOE) and U.S. Nuclear Regulatory Commission (NRC) staff conducted a Technical Exchange in Rockville, Maryland, in which the DOE presented its current approach to the disposal of the DOE owned spent nuclear fuel as it applies to the proposed geological repository at Yucca Mountain. NRC regulations (10 CFR Part 63) require DOE to describe the kind, amount, and specifications of the radioactive material proposed to be disposed at Yucca Mountain.

The detailed agenda for this meeting can be found in Attachment 1. The Technical Exchange included a video conference connection between NRC in Rockville, Maryland, the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas and DOE facilities located in Las Vegas, Nevada, and Idaho National Engineering and Environmental Laboratory (INEEL), Idaho Falls, Idaho. An additional audio connection permitted the remote participation of other interested parties. In addition to staff from DOE, NRC, the CNWRA and DOE's contractors, the meeting was attended by representatives from the State of Nevada; Clark County Nevada; Cogema, Incorporated; the Nevada Nuclear Waste Task Force; Lincoln County; Advanced Systems Technology and Management, Incorporated ;and Naval Reactors/Bettis Laboratory. Attachment 2 contains the list of attendees who were present at all four conference locations.

The meeting commenced with opening remarks by DOE and NRC. DOE identified the purpose of this technical exchange was to provide background on DOE spent nuclear fuel, to update NRC on DOE plans for treatment of DOE spent nuclear fuel in the proposed license application, and explained where the responsibility for DOE spent nuclear fuel fit in the Office of Civilian Radioactive Waste Management's (OCRWM) new organizational structure. The NRC stated that this was the first time in several years that there has been an opportunity to discuss this information. The NRC also stated that there would be no "agreements" reached at this informational Technical Exchange. Consistent with the detailed agenda found in Attachment 1, DOE presented their overview of DOE spent nuclear fuel including the use of sealed canisters. These presentations can be found in Attachment 3.

The following points regarding inclusion of DOE spent nuclear fuel in the planned license application were made by DOE

1) DOE expects to package and ship most of DOE spent nuclear fuel in sealed canisters to the repository.

2) The sealed canisters are designed to provide total containment during postulated preclosure events. Thus consequences of canister breaches will not be evaluated in the license application.

3) Preclosure criticality is expected to be screened out based on the low probability of introducing moderator into the dry processing cells of the surface handling facility.

4) Postclosure criticality is expected to be screened out based on the low probability of occurrence.

5) Postclosure releases for DOE spent nuclear fuel will use the source term methodology/results presented in the meeting and a surrogate fuel. DOE spent nuclear fuel dose consequences are expected to be significantly less than those from commercial spent nuclear fuel.

NRC identified several Items of significant interest 1) DOE's current plans to canister most of the DOE spent nuclear fuel; 2) Intact commercial assemblies owned by DOE will not be canistered; 3) Information describing the DOE spent nuclear fuel is available; 4) While the standardized canisters that DOE is evaluating have been designed to demonstrate containment for preclosure events, the multi-canister overpack was not designed to demonstrate containment, nor has it been completely evaluated for containment; and 5) The process of moderator exclusion to reduce criticality.

There was ample opportunity for questions and open discussion during the presentations as well as at the completion of formal presentations. Several issues were raised including DOE's assessment of how criticality is evaluated for DOE spent nuclear fuels, and several requests for specific information on DOE spent nuclear fuel as it becomes publically available.

Keng Stablein for 3/6/03
Janet R. Schlueter
Chief, High-Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards
U.S. Nuclear Regulatory Commission

April V. Gil 3/6/03
April V. Gil
Director, Regulatory Interactions and
Strategy Division
Office of License Application and Strategy
Office of Repository Development
Office of Civilian Radioactive Waste
Management
U.S. Department of Energy

Mark R. Arenaz 06 Mar 03
Mark R. Arenaz
Manager, National Spent Nuclear Fuel
Program
Idaho Operations Office
U.S. Department of Energy